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# INTERNATIONAL MIGRATION AND ECONOMIC DEVELOPMENT*

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The international migration of labor is an important component of globalization and economic development in many less developed countries (LDCs). The number of international migrants, or people residing in a country other than their country of birth, has increased more or less linearly over the past 40 years, from an estimated 76 million in 1965 to 188 million in 2005, as illustrated in Figure 1.

International migration raises both hopes and concerns for the LDCs from which international migrants come. The migrants include millions of highly educated people from countries in which human capital is relatively scarce (e.g., see Özden and Schiff, 2005), but also significant flows of relatively low skilled workers whose productivity and wages are far higher abroad than at home. International migration also produces benefits. The most tangible of these are remittances, the income that migrants send home.

The flow of international migrant remittances has increased more rapidly than the number of international migrants, from an estimated US$2 billion in 1970 to US$216 in 2004.[1] While the growth in international migration has been linear, the growth in remittances has been nonlinear, as one can see in Figure 2. On average, each of the world's international migrants is sending home more remittances today than in the past. There is not a single convincing explanation as to why this is so, but it has important implications for economic development. Nearly 70% of all remittances go to LDCs. It is likely that these remittance figures understate true international remittance flows, which include an undetermined amount of remittances in cash that does not enter countries through formal banking channels along with the goods that migrants send or carry home.

However much these official figures may understate remittances, people are the most important "export" of many LDCs in terms of the foreign exchange that they generate. For example, in 2004, remittances were equivalent to 78% of the total value of exports in El Salvador and 108% in Nicaragua. International migrant remittances are also an increasing share of *national income* in many countries. For example, in 2004, remittances represented 11% of the gross domestic product of Guatemala, more than double the share in 2001. In the same year, remittances constituted 16% of the total GDP of El Salvador. International migration is playing an increasingly important role in developing country economies.

There is little information on where, within countries, the international migration originates and remittances flow. Data from the few national income and expenditure surveys and various regional surveys that gather this information reveal that both migration and remittances are concentrated within, as well as among, countries. This means that international migration affects some countries, and within these countries, some regions, more than others.

International migration also affects men and women differently. Since at least the 1960's, the number of female international migrants has been nearly as large as the number

[1] Part of this sharp increase is probably due to an improved accounting of migrant remittances; however, the actual amount of remittances probably is higher than these numbers indicate, for reasons detailed below.

of male migrants. Today, the share of females in the world's international migrant population is close to one half, but there are differences among sending and receiving countries. The share of females in migration to some countries is higher than that of males. The share to other countries is lower for females. Some countries of emigration send more females than males abroad, and others do the opposite. What explains these differences in international migration between the genders is just now becoming a focus of international migration research.

Researchers used to ask whether migration has a positive or negative effect on development. Today they are more likely to ask: "Why does international migration seem to promote economic development in some cases and not in others?" and "Can policies be designed to influence migration's impacts in migrant-sending economies?"

Negative effects of international migration on developing countries have received considerable attention in both academic research and the press. These include the cost to LDCs of losing labor and human capital to foreign labor markets, especially the "brain drain."[2]

Less attention has been given to the positive effects of international migration. Increasingly the conclusion of academic research is that, although the negative effects of international migration cannot be ignored, they need to be balanced with the positive effects. These include remittance income and the economic multipliers that it produces; the influences of migration and remittances on investments, which appear to increase productivity in agricultural and nonagricultural activities; poverty alleviation; and migration-induced incentives to invest in schooling and health.

In the past, research on the impacts of international migration and remittances focused on the households and regions that sent migrants and received remittances, and it considered only the direct effects of migration and remittances in these households and regions. New research is uncovering many indirect ways in which migration and remittances influence incomes and production, both in the households that send migrants and in those that do not. The impacts of international migration appear to be greater and considerably more complex than simple remittance numbers suggest. The newly uncovered links between international migration and development potentially open the way for a variety of new policy interventions to increase migration's contribution to economic development.

## 1. International Migration and Development Puzzles and Paradoxes

Recent economic studies suggest that migration and development are closely linked to one another: development shapes migration, and migration, in turn, influences development, in ways that are sometimes surprising and often not recognized by

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[2] For example, see The World Bank's recent study, International Migration, Remittances, and the Brain Drain (Ça–glar Özden and Maurice Schiff, Eds., New York: Palgrave Macmillan, 2005).

researchers and policy makers. Paradoxes and puzzles abound. We begin by looking at some of these puzzles and what recent economics research has to say about them. Then we consider some implications for development policy.

*Migration and Underdevelopment: Chicken or Egg?*

There is little doubt that the loss of human resources to international migration can have negative effects on economic development in migrant-sending areas. If, as is likely to be the case, international migrants come from relatively labor-abundant areas, then sacrificing these individuals to foreign labor markets may not have a very large impact on production at the origin, as eloquently explained by Nobel laureate W. Arthur Lewis back in 1954.[3] However, if individuals who migrate abroad more skilled and highly educated than those who stay behind, and if this "human capital" contributes to productivity in rural areas, then international migration could reduce production and make those who stay behind less productive than they were before. (Actually, recent research suggests that the opposite may be true; in some cases migration may create a "brain gain" instead of a "brain drain," as discussed below.)

A big problem that researchers have in trying to test whether migration affects development is that underdevelopment also drives emigration. One usually does not see streams of migrants leaving economies that are dynamic centers of employment creation. If migration and underdevelopment seem to go hand in hand, it might be because the loss of people to migration retards development. Or it might be that people migrate away from underdeveloped areas, which have little to offer them if they stay. Naturally, both may be true; the question is which dominates. It is difficult to separate out cause from effect.

*Income and Emigration: Whither the Connection?*

Low incomes create an incentive for people to emigrate—which is the first part of the chicken-and-egg question. Yet, paradoxically, there are many cases where incomes are increasing and international migration is, too. It is usually not the case that the poorest households send migrants abroad. When a social scientist goes out to a village and asks which households the international migrants come from, the answer is usually households that are somewhere in the middle or upper middle of the village's income distribution.

There is a simple explanation for this. It has to do with incentives versus constraints. The very poorest households have an incentive to send migrants abroad and reap the reward of remittances far beyond what family members could earn at home. However, they know that international migration is costly and risky. The poorest households do not have the savings to pay the labor recruiter, the cost of a voyage, or the human smuggler. They are not likely to find a bank or informal moneylender who is willing to lend them such a large sum. And even if they did, they might not be willing to

[3] Lewis, W. Arthur, 1954, Economic Development with Unlimited Supplies of Labour, Manchester School of Economic and Social Studies 22:139-91.

take the gamble of losing whatever collateral they put up for the loan and exhausting their life savings. International migration can be a risky business. Some migrants fail to land on their feet at the destination, some are detained at the border, some fall victim to unscrupulous smugglers, and some succeed in migrating but fail to remit. Confronted by risks that they cannot afford to take, people tend to be conservative at heart. Perhaps that is why, despite enormous earnings differences across borders, international migrants constitute less than 3% of the world's population.

At the other extreme, rich households have the liquidity to pay the international migration bill and are likely to be more willing to take on the risks (or to have ways of insuring themselves against these risks). That is, they are more likely than poor households to have the means to migrate abroad. However, they are less likely to have the will. If earnings differences between rich and poor countries drive international migration, then it probably will not be the richest households that send their family members abroad as labor migrants.

There also may be relative income motives for rich households not to migrate. Suppose that you and your neighbor start out with the same income, but your child does not migrate while your neighbor's child does. Your neighbor's standard of living shoots up relative to yours, because of the remittances the child sends home. Through no action of your own, you have become relatively deprived. Recent economic research finds evidence that relative deprivation is an important variable driving international migration. The richest household, by definition, is not relatively deprived. Thus, from a pure relative deprivation point of view, it has no reason to participate in migration by sending a child abroad.

Which households will participate in international migration, then? The answer is the ones in the middle of the income distribution—or at the upper middle of the distribution, if costs and risks are high. Economic studies using survey data find, fairly consistently, that at very low levels of household income the probability of sending family members abroad is low. As income increases, the international migration probability also increases—until one reaches the top of the income distribution, at which point it falls.

### *International Migration Networks*

International migration decisions, like many other kinds of human behavior, depend on what other people are doing. The example of the relatively deprived household is one illustration. By far the most important variable driving international migration, though, is migration networks, or contacts with family members and perhaps also neighbors who have previously migrated. This is because "pioneer" migrants send home not only remittances but also information about how to migrate, where to look for work, what labor recruiters or smugglers to trust, what wages to expect, and migration costs and risks and how to overcome them. Past migrants also may support new migrants at the destination, and they may be willing to help finance the migration costs and insure against the risks. If a young woman in a Mexican village has a sibling in California, it is far more likely that she, too, will migrate to California than if she had no family contacts there. If she does migrate, it is likely that her sibling will arrange for a trusted coyote, or smuggler, to take her across the border. It is also likely that the sibling will pay the smuggler fees, after the woman is safely in the United States. The sibling will also provide housing, food, and job market contacts. In this way, family migration networks reduce the economic costs and risks of international migration while offering many other benefits, including a familiar face in a foreign land.

The benefits that a network affords are likely to be more valuable for international migration, which usually has high costs and risks—but also high economic returns—compared with internal migration. Recent findings suggest that the value of networks may be higher for women than for men, because female migrants appear to be more deterred by risky border crossings, uncertain prospects abroad, and concerns for personal safety. Research also suggests that the benefits created by networks are not limited to the households that have the family members abroad; access to networks eventually spreads across households in migrant-sending areas. The more households in a village that have migrants, the more likely that *other* households in the village eventually will send migrants abroad.

*International Migration, Inequality and Poverty in Sending Areas*

These two findings—that the "pioneer" migrants tend to come from households at the upper-middle of the income distribution, and that access to migration networks eventually spreads across households—can help us understand the effect of international migration on two measures of welfare in migrant-sending areas: income inequality and poverty.

Studies have come up with conflicting findings about how international migrant remittances affect income inequality in migrant-sending areas. Some find that inequality goes up when remittances flow in, and others find the opposite, that remittances are income equalizers. There may be a simple explanation for this disagreement among researchers.

Because the pioneer migrants come from households that can afford the costs and risks of international migration, these migrants send remittances primarily to households at the upper-middle of the income distribution. This increases income inequality directly, and it has little effect on poverty. However, over time, as more and more households (including poorer ones) gain access to international migration networks, the effect of remittances becomes less unequalizing. If the poorest households eventually gain access to international migrant networks, remittances could become income-equalizers, and they could reduce poverty in migrant-sending areas. That is, the effect of remittances on inequality could first go up and then come down—like an inverted "U." The effect on poverty could start out small and then become large.

Some colleagues and I explored this possibility using data from rural Mexico. We lined up Mexico's census regions by incidence of international migration, from the lowest to the highest percentage of households with migrants abroad. We then estimated the effect of a 10% increase in international remittances in each region on (a) inequality, as measured by a Gini coefficient, and (b) poverty, as measured by a Foster-Greer-Thorbecke index.[4]

Our findings are illustrated in Figures 3 and 4.[5] Figure 3 shows, sure enough, that remittances from international migrants increase inequality in regions where only a small percentage of households have migrants abroad, but remittances *reduce* inequality in the highest-migration region (the effect on the Gini coefficient there, one can see in the Figure, is less than zero). Figure 4 shows that remittances from international migrants have little effect on poverty in regions where only a few households have migrants (because most of the "pioneer migrant" households are not poor). However, in high-migration regions, increases in international remittances reduce poverty significantly. It appears that even poor households gain access to foreign migration opportunities in regions where international migration has really taken off.

*Remittance Use, the Quarter and the Lamppost*

An old joke tells of a man who comes upon an economist on his hands and knees, looking for a quarter underneath a lamppost. The man asks where he was when he realized he lost the quarter. The economist answers: "Well, I lost it up the street, but the light is better here."

People often look for the effects of international migration in the wrong places, because it is the easiest way. A good example is remittances. Remittances are the most tangible benefit of international migration. The great hope for decades has been that the households that receive remittances will invest them productively, in ways that create new income opportunities at home and perhaps offer an alternative to migration in the future. It seems natural to ask households how they spent their remittances. Many "remittance use" surveys have asked people whether they spent their remittances on "productive investments" or whether they squandered them on "consumption." Most remittance-use studies conclude that a large part of remittances is consumed instead of invested and thus is not put to productive use in migrant-sending areas.

Asking people how they spent their remittances is like looking for the fabled quarter underneath the lamppost. It is the easiest strategy, but one is looking in the wrong place. The question one really wants to ask is: "How did having remittances change what you did—the things you produced, the way you produced them, and the things you spent income on?" This is a different question, unless for some reason remittances are always earmarked for specific purposes, which does not seem to be the case.

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[4] This index measures both the share of households with income below the poverty line and how far these poor households' incomes fall short of the poverty-line income. That is, it reflects the effect of remittances on the incidence as well as the depth and severity of poverty in each region.

[5] J. Edward Taylor, Jorge Mora, and Richard Adams. 2005. "Remittances, Inequality and Poverty: Evidence from Rural Mexico." University of California, Davis, Working Paper (http://repositories.cdlib.org/are/arewp/05-003/)

In Mexico, when we asked people how they spent their remittances, they usually said on consumption. But when we compared expenditures in households with and without international migrants, we found that the households with international migrants spent more on investments and less on consumption than other households at the same income level. Similar findings come from studies in other parts of the world. For example, a study in Egypt concluded that among households with the similar incomes, the ones that got more of their income from international migrant remittances spent more on investments.[6]

*International Migration and Market Failures*

Why would sending a family member abroad make some households invest more at home? The answer seems to be that international migration does more than simply create remittances. It also helps households overcome some of the constraints that they face when markets do not work well. In the past decade, development economists have focused their attention on market imperfections, including missing credit and insurance markets, high transaction costs in output and input markets, and limited access to information due, for example, to poor communications and transportation infrastructure. Banks usually do not lend money to small farmers. Formal insurance is nonexistent for most people in LDCs. Often, marketing infrastructure is poor and transaction costs high. For example, many—and in some LDCs, most—farmers do not sell because of the high cost of getting their crops to market and a lack of market information. Even if they could get the cash to purchase inputs like fertilizer and pre-harvest labor, the supply of inputs often is unreliable, transportation costs are high, and workers outside the family may be hard to monitor.

International migration may offer a solution to some of these problems. Market failures may create incentives to send family members abroad, because they make it more difficult to secure a livelihood at home. They also create new avenues by which migration and remittances can affect production, incomes, and expenditures in migrant-sending households. New research is beginning to uncover the complexity of migration as an economic institution that can help households overcome market failures. This research is loosely referred to as the new economics of labor migration (NELM), and it has important implications for policy.[7]

To illustrate, imagine a rural household that is engaged in subsistence production but wishes to shift to commercial production, say, in response to new market opportunities. Because the household is a subsistence producer, it does not have the cash to invest in commercial production. No bank is willing to make a loan to a subsistence farmer, and the local moneylender's terms are prohibitive. The farmer also faces the risk that a new investment in commercial farming will not succeed—a big gamble for a subsistence household. A migrant, through remittances or the promise of remitting in the event of adverse shocks, can provide this household with capital and income security that may facilitate its transition from subsistence to commercial production. That is, where small

[6] For example, see Taylor and Mora (2005) and Adams (2005).
[7] For example, see Stark (1991) and Taylor and Martin (2001).

farmers do not have access to credit or insurance, the migrant can become the financial intermediary, the credit or insurance substitute.

International migration is more attractive than internal migration for this purpose, for two reasons. First, it is likely to be a larger source of cash—remittances from an international migrant typically are several times larger than remittances from an internal migrant. Second, it may be a better "insurance policy," because it is less correlated with local income. For example, if the crop fails, people can easily migrate to the city, and a rush of migrants could compete for limited urban jobs. High costs make migrating internationally less feasible as a quick response to crop failure. There is little reason to think that a crop failure would affect employment or wages abroad. Having an international migrant is like holding an insurance policy: migrants can bail the family out by sending home remittances, if they need to.

International migration does not help households overcome all kinds of market failure, though. If labor markets do not work well, and households cannot purchase input substitutes (hired labor and other family labor-saving inputs), production may fall when family members migrate. This is more of a problem for international migration, which usually entails movements across large distances, than for internal migration. An internal migrant might be able to come home at harvest time when her labor is most needed by the household. An international migrant, in most cases, will not.

A growing number of studies are finding that the effect of international migration on production in migrant-sending households is negative in the short run (because of the loss of family labor) but positive in the long run (because of the new investments that international migration can facilitate). In Mexico or Central America, when one finds a successful new production activity in a rural area, often there is an international migrant in the family. In a survey of businesses in rural Mexico, one researcher found that 61 percent were founded with U.S. migrant earnings. A number of studies from other world regions echo these findings.[8] Our analysis of data from the Mexico National Rural Household Survey suggests that international migration may not only raise rural incomes but also make land and farmers education more productive. By providing households with the liquidity and income security they need to invest, migration and remittances can create "income multipliers" within households. Income in migrant sending households increases twice, first because $1 of remittances adds $1 to household income, and second, because the household's income from production rises, as well. Similar kinds of income multipliers have been found to result from government transfer programs in LDCs.[9] Remittance use studies tell us nothing about these many indirect effects of international migration on sending households.

### *Looking for International Migration's Effects in the Wrong Households*

Just as remittance use studies look for the impacts of migration in the wrong places *within* the migrant-sending household, studies focusing on migrant households

[8] For a detailed review, see Taylor, et al., 1996.
[9] For example, see De Janvry, Sadoulet and Davis, 2001.

may be looking for the effects of migration in the wrong households. In many cases, when remittances from international migrants increase, the incomes of households that *do not have migrants* also go up. Yet, until recently, researchers focused their attention only on the households that have migrants and receive remittances.

Since the famous work of John Maynard Keynes, governments have recognized that public spending creates income multipliers. So do migrant remittances. Studies show that $1 of remittances from international migrants may create $2-$3 or more of new income in migrant-sending areas. This is partly because of the multiplier within the migrant-sending household, discussed earlier. However, it is mostly because the households that receive remittances spend their income on goods and services supplied by others in the local economy. One person's spending is another person's income. For example, if a village household receives $100 in remittances, its income increases, in the first instance, by $100. Suppose that it spends $10 of this new income on meat from a local butcher, another $40 paying a bricklayer for a home improvement project, and the rest on building materials purchased in a nearby town. Now the incomes of the village butcher and bricklayer also increase. The butcher and bricklayer, in turn, spend part of their new incomes at the village store, creating income for the storekeeper, and so on. In this way, the $100 of remittances creates a local income multiplier, similar to a Keynesian fiscal multiplier, in the migrant-sending economy.

The money spent in the city is a leakage; it does not contribute to the village income multiplier. However, it may create an income and employment multiplier in the city. The more closely integrated the village is with outside markets, the more the multiplier becomes diffused to other parts of the national economy.

It can easily be shown that if 50 cents out of every dollar are spent on goods and services purchased in the local economy, the local remittance income multiplier will be $2. Even if all income in remittance-receiving households is spent on consumption, remittances may stimulate investments by the other households whose incomes go up. Whole economies may be transformed by international migration, as expenditures transmit the impacts of migration from those who receive remittances to others in the sending economy. Many, perhaps most, of the impacts of remittances may not be found in the households that receive the remittances.

Remittance multipliers are an example of what economists call "general equilibrium" effects of migration in sending economies. There are other kinds of general equilibrium effects. For example, new demand stimulated by migration may drive up prices of nontradables, or goods and services whose supply in the local economy is fixed (like land or, perhaps, bricklayers) or which cannot easily be purchased from distant commercial centers (services like haircuts and goods for which transportation and transaction costs are high). There is evidence that wages and land prices are higher in regions that send large numbers of migrants abroad. This may create a drag on production activities that use large amounts of land and/or labor as inputs, unless productivity per hectare and/or worker also increases.

Findings from economic studies using "computable general equilibrium" or CGE models suggest that, in the short run, international migration may negatively affect local production activities by competing for human resources. Activities that rely most heavily on labor tend to compete most with migration. However, in the medium to long run, international migration may have a positive effect on local production, because of the income and investment multipliers that it creates.

This short-run versus long-run story is mirrored in some economists' findings about the migration effects of trade integration, whether through the WTO or regional trade agreements like NAFTA. It is many LDCs' hope that new trade opportunities will stimulate income and employment at home. One would think that this might deter emigration. However, CGE studies find that emigration may increase in the short run if trade reforms spur imports that compete with labor-intensive production. In the long run, if export activities expand and remittances create income and investment multipliers, emigration pressures may subside. Many countries have experienced an international migration transition, previously sending large numbers of workers abroad and now being magnets for immigrants. Examples include southern European countries, Ireland, and South Korea.

*The Myth of Stay-at-Home Development*

One often hears of investing scarce resources (including remittances) in stay-at-home development of rural areas. Yet the alternative to international migration usually is not staying at home—it is migrating somewhere else. Figure 5 illustrates that, as per-capita incomes increase, the share of the workforce in agriculture not only goes down—it plummets. In 2004, in Burundi, Burkina Faso, Niger, Malawi and Rwanda, with a per-capita income (PPP adjusted) of US$620 to $1,230, 90% or more of the national workforce was in agriculture.[10] Between 79% and 94% of the population lived in rural areas. China, at $4,980 per capita PPP, had 49% in farm jobs and 63% living in rural areas, and these percentages were falling fast. Rich countries typically have less than 5% of their workforce in agriculture and 25% or less of their populations living in rural areas. Remarkably, per-capita income alone can explain 85% of the variation in the percentages of workforces in agriculture among countries.

Enormous differences in rural development policies among countries seem to have little effect on whether people stay in agriculture or not. Look at the rural development success stories. China, where international migration is generally not an option for the rural population, is one. Between 1990 and 2004, the percentage of China's worker force employed in farm jobs plunged from 72% to 49%. Chile, despite its famous agricultural export boom, saw the share of its agricultural workforce fall from 19% to 14%. In Japan and France, despite expensive agricultural support programs, agriculture's share of the workforce today is 5% and 4%, respectively. In the United States, where farm support programs are legendary and the question of emigration is academic (but immigration is huge), less than 2% of the workforce is in agriculture, nearly all of the farm workforce is foreign-born, and 23% of the population is rural (this includes many high income people for whom rural living is an amenity and the internet

[10] Purchasing Power Parity. This is a better way to compare standards of living because it takes into account differences in the purchasing power of a given dollar of income across countries.

transforms rural homes into offices.) In the UK, 2% of the workforce is in agriculture and 11% of the population lives in rural areas.

### *The Gender Question*

The 2000 U.S. Decennial Census found more male than female immigrants from El Salvador living in the United States, but more female than male immigrants from the Dominican Republic. Both countries are in the same region of Latin America; they have similar institutions, economies, histories, and per capita GDPs, and one might expect that immigrants from both nations would be employed in similar occupations in the United States. Similarly, India-to-U.S. migration is male dominated, while immigration from China and South Korea is dominated by females.[11] The 2003 Mexico National Rural Household Survey found that some villages send significantly more male than female migrants to the United States, while other villages send more females.

What can explain these differences in migratory patterns between men and women? In the nascent literature on gender and international migration, an abundance of hypotheses exist. The gender division of the receiving country's labor market has an influence. For example, the United States economy draws large numbers of low-wage laborers from Mexico to work in male-dominated agricultural and service jobs that include construction, gardening, and janitorial work. Asian cities attract large numbers of nurses and domestic service workers from the Philippines. Immigration laws also have an effect. Some destination-country immigration policies facilitate the reunification of families, some aim to fill low-paying jobs that cannot be filled by domestic workers, and others attract high-skilled workers in competitive fields in which one gender may predominate. Immigration laws can induce temporary or permanent migration, individual or family movement, and legal or illegal border crossings, all of which may have different implications for men than for women.

The level of development of destination countries also seems to matter. Females tend to claim a larger share of immigration in developed than in developing countries. This may be due to immigration laws, which seem to evolve towards a greater emphasis on family reunification as incomes rise. Developed countries also offer women access to a wide variety of educational and employment opportunities, and they may offer women a degree of autonomy and independence not available at home.

### *Summing It All Up*

The discussion of international migration puzzles and paradoxes leads us to the following conclusions, which set the stage for thinking about migration-and-development policy options.

- Under-development drives migration, but migration also affects under-development

[11] Citizenship and Immigration Canada, Facts and Figures, 2002

- Income gaps between rich and poor countries create incentives for international migration, but they are a necessary—not a sufficient—condition. Most people do not migrate, even when incomes are far higher abroad than at home.

- Income growth in migrant-sending areas often is associated with more international migration, not less. In all countries that experience rapid income growth, the share of people in farm jobs and in rural areas goes down.

- International migration can have many complex effects on migrant-sending households and also on the rest of the economy in migrant-sending areas. Surveys of how households spend their remittances tell us very little, if anything, about these effects.

- International migration is driven by networks, whether through contacts with others who have migrated or through recruitment. Once international migration from a particular region reaches a certain point, it tends to take on a life of its own.

- Half of the world's international migrants are women, whose motives for migrating, constraints, concerns and impacts on sending areas often are different than those of males.

## 2. Policy Options

The international migration and development puzzles presented above lead us to a rich set of potential policy implications. Some examples are presented below.

*The Mistake of Designing Policies to Keep People at Home*

This might appear to be controversial and highly provocative, but it is really common sense. History teaches us convincingly that trying to keep people at home is not only very costly, it is futile. As we saw in Figures 5 and 6, increased mobility is a concomitant part of economic success: as per capita incomes grow, people leave the agricultural sector, and they move out of rural areas. Even in countries with the biggest rural development success stories, the share of the workforce in agriculture is decreasing. The countries that have been most successful at "keeping people on the farm" have been precisely those that have been least successful at raising their people's living standards and developing their agricultural economies.

This does not at all mean that governments should not redouble their efforts to stimulate income growth and development in sending areas, for at least 2 reasons. First, when low farm incomes are compounded by poor access to markets for inputs, outputs, credit, and insurance, there may be too much migration. Households in these situations have to rely on family migrants not only for income but also for liquidity to invest in rural production activities, income security, support in old age, and other benefits usually provided by private businesses or governments in developed countries. Each new role that migrants play for their rural households can increase emigration pressures.

A government's lack of attention to rural development also limits the incentives for households to invest their migration-induced savings in the rural economy. Often in rural areas roads, communications, and marketing infrastructure are poor and small farmers lack information about new markets, product standards, production practices and technologies, access to credit, and income security. They have little idea of how to take advantage of new market opportunities, for example, becoming part of new supply chains for a rapidly expanding supermarket sector. In this environment, the costs and risks of investing in new production will be high. Many of the same problems that induce people to migrate in the first place also limit migration's ability to stimulate development in migrant-sending areas. In countries where income and agricultural production are growing, migration is a reflection of success, and international migration and remittances can find fertile ground to contribute to development. However, in economies that are stagnant and riddled with market failures, migration is a reflection of failed development, and its positive effects are likely to be more limited.

Second, it is now well know that in countries where agriculture is not growing, the rest of the economy usually does badly, too. Occupational migration, out of farm jobs, and geographic migration, out of rural areas, will happen regardless of whether incomes are growing or not. The decision that governments have to make is whether to make migration part of a dynamic process of income growth or simply let it be a response to limited opportunities in migrant-sending areas.

*The Error of Being Passive*

Once international migration begins to take off in a particular community or region, it seems to take on a life of its own and is very difficult to stop. It might seem, then, that if countries want to limit the loss of people to foreign lands, they should concentrate their development efforts on regions where international migration has yet to take hold. But this creates a conundrum for policy makers. On one hand, turning a poor area that may be ripe for international migration into a dynamic economy that might keep a few more people at home is difficult, costly and risky. In some cases, it may be infeasible, for example, if natural resource constraints are too severe or distance to markets too great. On the other hand, international migration can offer a solution to some of these problems, by producing a potentially large and secure flow of financial resources, via remittances, that could be invested in the local economy. Keep in mind that international migrant remittances far exceed total international development assistance in the world today. In government-sponsored development programs there is a danger that benefits will be captured by rich households. In the case of migration, remittances usually do not go to the richest households (though often they do not go to the poorest, either).

Thus, a poor LDC may find international migration a useful way to obtain financial resources for development projects. Indeed, a number of countries now have labor-export strategies and are experimenting with various schemes to try to make remittances more productive at home, as discussed below. Herein lies another paradox, though: to obtain remittances, LDCs have to sacrifice human resources to international migration. In some cases this means sending relatively educated and skilled people abroad, from LDCs in which human capital—that is, education and skills—are scarce. To make matters worse, as soon as international migration from a particular region begins to take off, local production finds itself in competition with the foreign labor market for workers. In the extreme (though perhaps not uncommon) case, this can create a sort of "Dutch disease," in which a (human) export boom causes the local production of tradables to contract—a problem that is well known to petroleum and other resource-exporting countries.

This conundrum replicates itself on a micro level. Consider the migrant household, which receives the remittances but also loses the human resources. Is it reasonable to expect the same household to be good at both migrating and investing in production? If some households in a village are good at migrating while others are better at producing, then the trick is to link up the latter with the former, for example, through micro credit, so that productive investments can happen. If, instead, all that the second household gets from the first is information about how to migrate, its incentive to invest in local production activities may go down. This conflict between needing migration, like the goose and the golden eggs, yet having to sacrifice human resources to get it, may be the single greatest challenge of using international migration as an instrument for economic development at home.

It is easy for a government simply to sit back and watch as international migration unfolds. This is a mistake. International migration can easily become a substitute for sound development policies. The good news is that migration can provide a remittance income stream that improves the livelihood of households that do not have access to other opportunities. As we have seen, after international migration "takes off," it increasingly can benefit the poor. The bad news is that, without the right economic environment, international migration can turn sending areas into "nurseries and nursing homes" instead of dynamic economies that over time can offer economic alternatives to migrating. Governments need to actively partner with international migration in order to make migration a tool for development.

*Migration as a Development Tool*

Migration is neither a cure nor a curse for development. However, there are ways to enhance migration's contribution to economic development in migrant-sending areas. This is especially true for international migration, because remittances per migrant abroad tend to be much larger than those from internal migrants (around 15 times greater in the case of rural Mexico), and remittances from foreign migrants are likely to have a low correlation with local income, making international migrants an ideal income-insurance policy. These are some of the ways in which governments and foreign aid donors have begun to think about and design policies to make migration a more productive tool for development:

*a. Reducing Remittance Transaction Costs.*

Sending money home is not a simple matter. Western Union, Moneygram and other agencies have amassed a fortune by charging migrants high fees for wiring remittances. It has been estimated that transaction costs constitute up to 15-20% of the total value of remittances. The alternative of sending cash, even with friends and relatives, can be prohibitively risky.

When you and I travel abroad, matters are simpler: simply insert your ATM card upon arrival at the foreign airport, and currency magically appears, for a low fee of perhaps 2-3% of the amount of the transaction. However, this requires having a bank at each end of the remittance transaction and a relationship between the two. Many migrants have a bank account in the destination country. They can use their ATM cards as we do whenever they please. However, few remittance recipients have bank accounts, particularly if they live in rural areas. For example, only one in five Mexicans has a bank account, and almost 30 percent have no access to financial services. This low participation rate stems from a traditional distrust of banks and citizens' unfamiliarity with the banking sector, because banks traditionally have focused their services on wealthier households.

Taking steps to improve remittance-receiving households' access to banks is a critical first step towards reducing high transaction costs of international migrant remittances. Facilitating relationships between banks at home and at migrant destinations abroad is another. Wells Fargo, the first U.S. bank to enter the remittance market in Mexico, began offering remittance services in 1995. Since then, U.S. and Mexican banks have partnered to provide services specifically designed for the Mexican immigrant population. In 2002, Bank of America partnered with Grupo Financiero Santander Serfin, and Citibank entered into a partnership soon afterward with Banamex. Earlier this year, the Federal Reserve System initiated FedACH International, an automated clearinghouse that enables any financial institution in the United States to send payments to Mexico. Largely as a result of these initiatives, the transaction cost of U.S.-to-Mexico remittances has fallen to between 2 and 7 percent of the amount transferred through First Data Corp's Western Union subsidiary.[12]

There have been unilateral efforts in the United States Congress to end "exorbitant and hidden fees levied against them unknowingly and unwillingly as part of the remittance transaction."[13] Nevertheless, little is likely to be accomplished unless remittance-receiving countries take the initiative to offer cheaper ways for their nationals to remit from abroad.

*b. Leveraging Remittances*

Reducing remittance transaction costs can increase the amount of remittances reaching migrant-sending households. A second area of policy intervention is aimed at leveraging these remittances in ways that improve welfare and stimulate investments in migration-source areas. Leveraging remittances means seeking ways to multiply the amount of funds available to invest. This can be done on three levels.

First, *individuals* can obtain credit for small-scale production (and other) activities, using remittances as collateral. When households set up bank accounts to which remittances can be sent, a relationship is established between the household and the bank. Banks can offer other services to households, including credit, multiplying the household's liquidity available to invest. Banks may consider remittance income when deciding whether or not and how much credit to extend to households. If non-migrant households also have bank accounts, then local credit markets can be used as a conduit to make savings by migrant households available to other households, which may be in a better position to invest these savings productively. Given well documented imperfections in LDC credit markets, particularly in rural areas, micro-credit programs increasingly are a focus of policies to harness remittances for investments at home. Some, modeled on the Grameen Bank, focus on women. If most migrants are men, there is an additional incentive to target micro-credit initiatives at women.

Second, groups of individuals can organize and seek remittance matches for larger development projects. Under Mexico's *tres por uno* program, migrant home-town associations in the United States team up will villagers to propose community development projects. For every dollar that the migrant association puts up, the federal, state and municipal governments each supply an additional dollar. This triples the

[12] Martin, Philip, Susan Martin and Patrick Weil. 2006. Managing Migration: The Promise of Cooperation. Lexington Books.
[13] E.g., see the Sarbanes initiative:
http://www.senate.gov/~sarbanes/pages/press/041905_remittance_legis_bank.html

funding made available by remittances for civic projects. It also promotes community-based development and creates an incentive for migrants abroad to contribute more income to their communities at home. Tres por uno has supported a wide range of small infrastructure projects including water and sanitation, road pavement, rural electrification, micro-enterprises and small and medium enterprise development. The benefits of these matching programs generally are limited to the communities that have a critical mass of emigrants who can form an association and generate a sufficient remittance base for projects. One can imagine alternative strategies that might overcome these limitations. For example, "migrant bonds" could be sold to migrants abroad, guaranteeing them a reasonable rate of return while making proceeds available for community-based development projects. Associations of hometown associations may be able to pool resources for projects across more than one community.

A third way in which the investment potential of remittances can be multiplied is through government collateralizing of remittance flows. Government borrowing can be collateralized with future receipts, not only with existing assets. Remittances are an example of such receipts. Collateralized future receipts (CFR) arrangements, common in the commercial sector, have recently begun to grow in the public sector. It should be noted that not everyone believes that this is a good idea. The International Monetary Fund (IMF) Board's view has been cautious:[14]

> "Collateralized borrowing, if held under appropriate restraint, could be a helpful device for regaining capital market access during difficult periods, and could pave the way for uncollateralized borrowing [but]...extensive granting of collateral reduces a country's flexibility inmobilizing and managing foreign exchange and could increase its potential vulnerability to shocks."

*c. Increasing the Contribution to Development.* Migrant remittances have the biggest potential effect on economic development when they do more than simply hand income to migrant-sending households or communities. The trick is to create an environment in which remittance multipliers can flourish. When a dollar sent home by a migrant creates more than a dollar of new income in migrant-sending areas, both migrant and nonmigrant households can benefit. Remittance multipliers can take different forms, as can government programs to increase them.

Remittances create income multipliers within remittance-receiving household in the short run when they relax constraints on household purchases of inputs for production activities. For example, the money a migrant sends home might make it possible to buy both food for the family and fertilizer for a crop, which in turn creates more value when

[14] International Monetary Fund, 2003. "Assessing Public Sector Borrowing Collateralized on Future Flow Receivables." Washington, DC (http://www.imf.org/external/np/fad/2003/061103.pdf)

the crop is harvested and sold (or consumed by the family). The remittances might make it possible for the family to grow the crop with a more productive technology, for example, a higher-yielding seed variety, or to buy inputs for a non-agricultural enterprise.

Remittances can create long-run income multipliers for migrant households when they facilitate investments in capital, both physical and human. For example, a household with remittances invests in livestock, and the income multiplier is realized when the animal products or grown animals are sold. A household with remittances opens up a store in the village, buys a vehicle, or makes some other investment that give it access to a new stream of income. If remittances increase schooling expenditures, they may create multipliers in the form of more productive family members at home or higher wages for educated children, who in turn may share their wages with their parents.

Both short-run and long-run multipliers in migrant households will not happen if the remittances do not trigger the purchase of the inputs or the productive investment. What creates the incentives to invest if you are a remittance-receiving household? You have to be convinced that the investment will pay off and be worth the risk. That means having (or being able to obtain) the know-how to efficiently perform the production activity. It means having access to markets for inputs and outputs and knowing how to make use of these markets effectively. It means understanding that there will be a payoff to the child's education in the future. Nothing will wreck these incentives as quickly as a poor transportation, communication and marketing infrastructure; a lack of access to extension services or to schools; a belief that education cannot offer a way out of poverty; a macro-economic environment riddled with uncertainty; or, of course, a civil war.

Income multipliers inside the migrant household can be compounded by multipliers outside the migrant household. As we have seen, remittance multipliers outside the migrant household are created when the migrant household spends its new income on goods and services supplied by other households in the migrant-sending economy. The strength of these multipliers depends on two things: first, how the migrant households spend their income, and second, other households' ability to increase their supplies of goods and services.

Fortunately, most households spend most of their income locally. This opens up the possibility for businesses in the migrant-sending area to benefit from remittances. However, to do so, these businesses must have access to the infrastructure and inputs needed to increase their supply of goods and services. Potential obstacles abound. For example, suppose migrant households wish to build new houses, but the local brick maker does not have the liquidity or the access to credit he needs to increase his production of bricks. In this example, a micro-credit program that increases credit available to the brick maker could be the key to creating a local income multiplier.

Many other types of policy interventions can complement migrant remittances and create incentives for both migrant and other households to invest. These include infrastructure development (roads, communications), marketing, education, and technology and other extension programs. These types of programs can complement remittances by improving infrastructure and raising the productivity of household assets.

There are two keys to the effectiveness of all of these programs. First, they must create incentives by helping to make investments in migrant-sending areas more profitable and less risky. Second, they must loosen the constraints that keep households from responding to these incentives. This includes getting resources (including remittance-induced savings) into the hands of people who will invest them.

The primary aim of government programs as complements to international migration is to raise the development potential of international migration, including making international migration a more effective tool for poverty alleviation in LDCs. A by-product may be that emigration pressures eventually subside somewhat. Creating the right economic environment so that international migration can contribute to development can also increase remittances. Studies demonstrate convincingly that the best way to maximize the volume of remittances is to have an appropriate exchange rate and economic policies that promise growth.[15]

*The Need for Gendered Migration and Development Policies*

Researchers are becoming increasingly aware that gender is important when studying the motivations, outcomes, and barriers to international migration. In fact, Kanaiaupuni (2000) states that "migration is a profoundly gendered process and the conventional explanations of men's migration in many cases do not apply to women." To ignore the gender-specificity of societal norms, history, social networks, labor markets, and migration benefits, costs and risks would overlook important determinants and effects of migration. Policies, like research, that focus only on male migration easily produce unintended effects and miss opportunities to increase the development potential of international migration. Examples abound; a few will suffice to illustrate this point.

If countries wish to make labor exports part their development strategies, then it is critical to understand both the gender segmentation of export-labor markets and differences in migration behavior by men and women. There is no reliable information on what share of the world's remittances is sent home by women, but it is almost certain that this share is large and rising, making women increasingly important sources of foreign exchange and capital for development. Countries that think about gender when investing in human capital and when negotiating labor export agreements with foreign countries can tap opportunities that may be missed by other countries. The vulnerability of female migrants working abroad may expose women to gender-specific risks, for which monitoring and protections are needed as part of these labor-export programs.

There is growing evidence that women remit different amounts and for different reasons than men. A study in Mexico found that female migrants send home more remittances, on average, than male migrants, and females are more likely to send home money when their households in Mexico suffer income shocks due, say, to a parent's

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[15] For example, see Ratha, Dilip. 2003. Workers' Remittances: An Important and Stable Source of External Development Finance. Chapter 7 in Global Development Finance 2003. World Bank. http://www.worldbank.org/prospects/gdf2003/

illness. That is, in addition to being more committed remitters, female migrants seem to play more of an "insurance" role for their households than do male migrants.

Women may migrate for different reasons than men. The reasons for moving abroad are numerous and complex. On balance, it appears that men are more likely to make the move for purely economic reasons, while women are more likely than men to be "tied movers." There are many documented cases in which women migrate abroad to follow a spouse, even when their income and psychic well being would be higher at home. There are many other cases in which a woman's income would be higher by migrating abroad but the woman remains behind to care for other family members, especially children who would be costly to move.

Nevertheless, female labor migration is increasingly important on a world scale, and there are a number of countries in which women have become a vital element of labor exports, e.g., nurses from the Philippines. It is crucial for governments to recognize differences between men and women in terms of the factors shaping international migration, remittances, and impacts in sending areas. Networks of contacts with those who migrated previously have a different effect on male and female migration. If a family's male contacts abroad work in construction or farm jobs, they may not be very useful for placing a new female migrant in a domestic service or nursing job. Private and public labor recruitment strategies, in order to succeed, need to understand these gender differences.

Finally, the gender of those who stay behind should be considered carefully by governments, NGOs, and international donors wishing to use international migration and remittances as a tool for development. As mentioned earlier, the creation of micro-credit programs that make remittance-induced savings available to a wide range of households (not only those with migrants) is a natural component of programs to simulate economic development in migrant-sending areas. Such programs almost certainly will have to include women. This is true not only because of the well known success of micro-credit programs targeted at females, but also because, when most of those who migrate abroad are males, more of the "migration and development work" at home will have to be done by women.

## 3. Concluding Remarks

Migration is neither a panacea for economic development nor the opposite. It is unquestionably an integral part of income growth in all countries, and international migration is an important component of migration in many LDCs. Economic development and underdevelopment shape migration. Migration, in turn, shapes development. The critical question for LDC governments is how to design policies that can enhance the potential for migration to contribute to economic development in migrant-sending regions—that is, how to use migration as a development tool.

This paper has summarized current thinking on international migration and its impacts. It has considered what governments' policy objectives concerning international migration ought to be and presented some examples of how they might be achieved. The intent has been to present a non-academic discussion that is grounded in findings from international migration research. There are many preconceived notions about what drives international migration and how it affects development. This paper has tried to dispel some of these, as a first step towards thinking realistically about international migration and designing sound policies that can use international migration as an instrument for development.

In general, it does not make sense for governments to make a goal out of trying to keep their populations in rural areas and in farm jobs. No country in the world has succeeded in doing this without condemning itself to low income and widespread poverty. However, government policies have a critical role to play in an international migration context. The ability of countries to create an environment that is conducive to broad-based economic growth can shape the economic landscape in migrant-sending areas, the contributions of migration to development, and the non-migration options available to those who stay behind.

Figure 1. Upward Trend in Total International Migration, 1965-2005

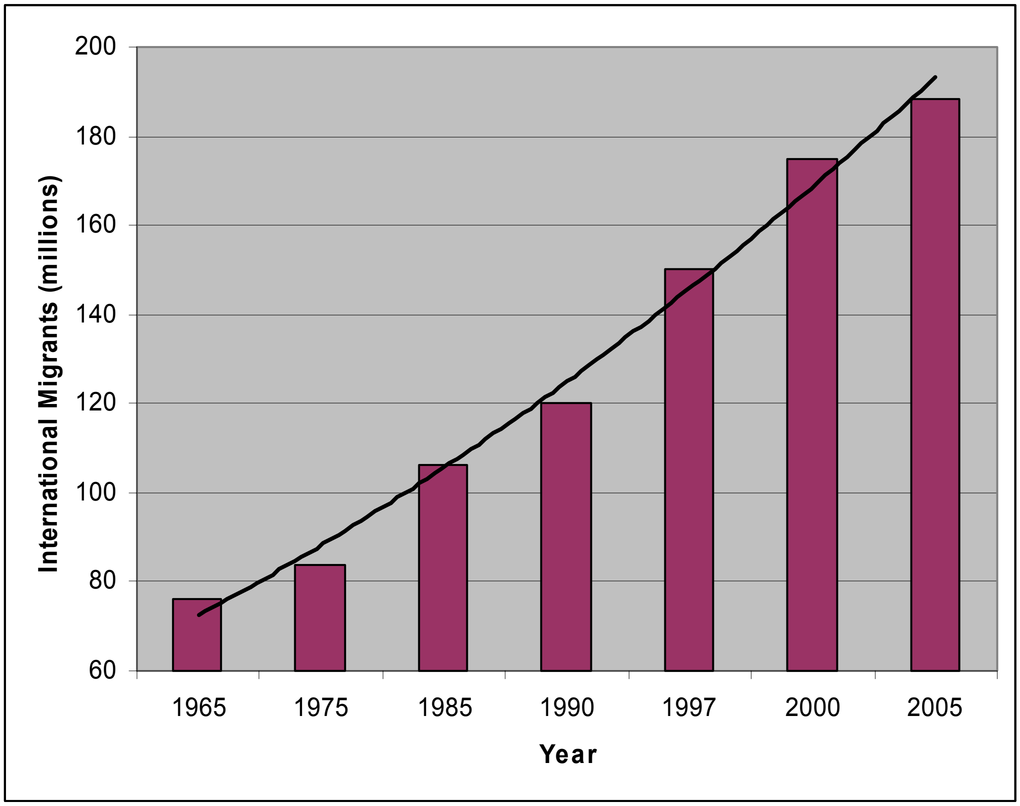


Figure 2. Growth in Total International Migrant Remittances, 1970-2004

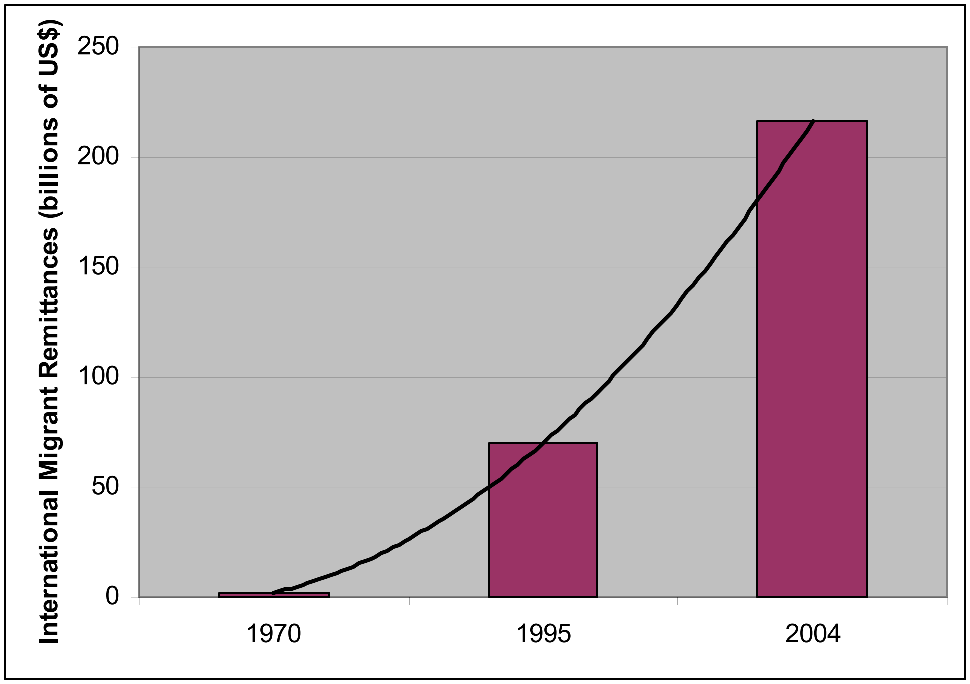
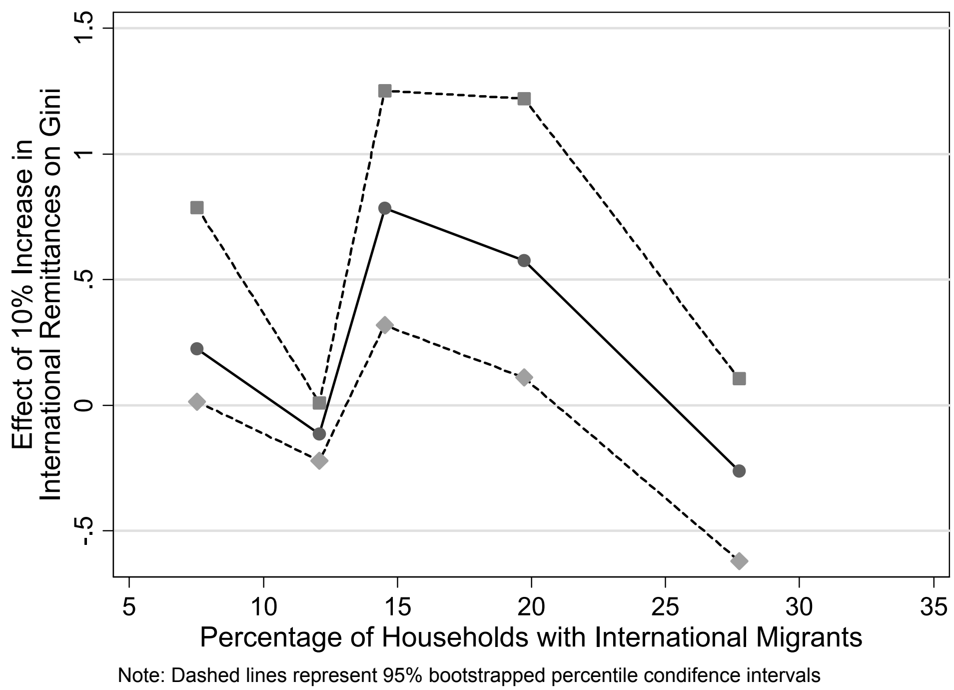


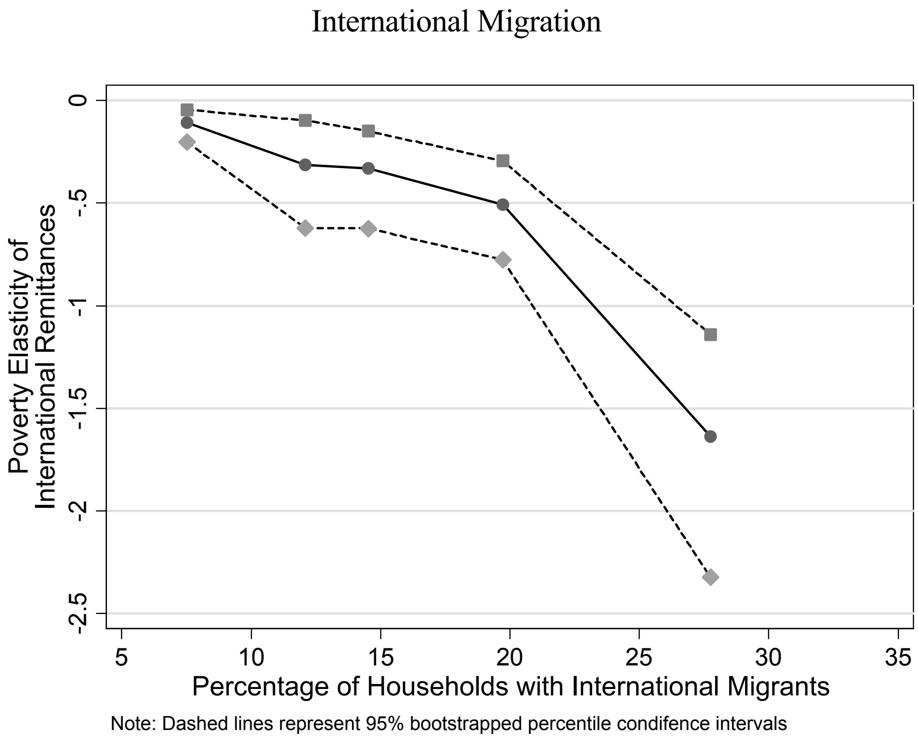
Figure 3. Relationship Between Regional Percentages of Households with Migrants and Effect on Gini of a 10% Increase in Remittances, by Migrant Destination

International Migration



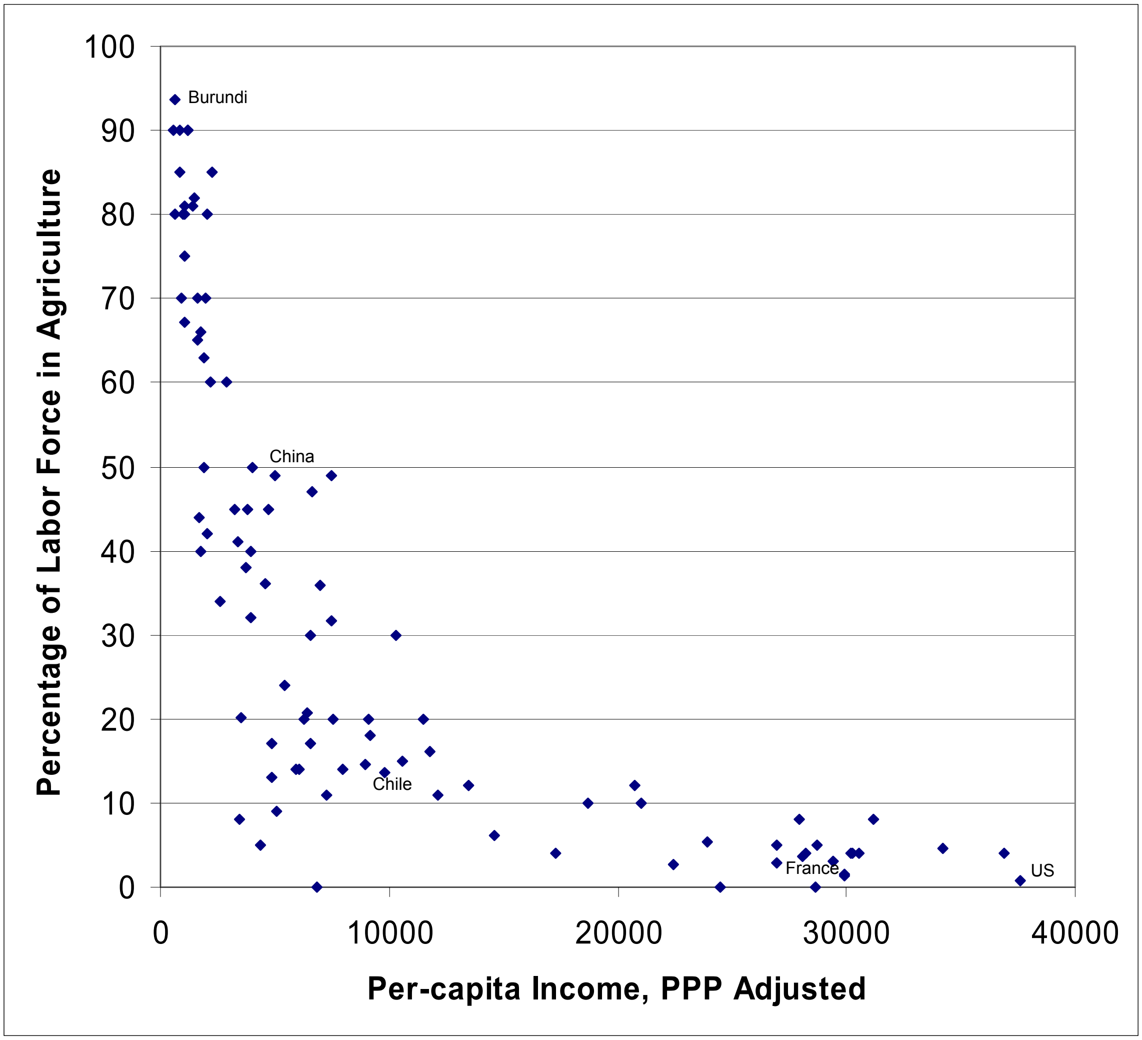

Source: Taylor, Mora, Adams and Lopez-Feldman (2005)

Figure 4. Relationship Between Poverty Elasticity of Migrant Remittances and Regional Percentage of Households with International Migrants (FGT Index, $\alpha$=2)




Source: Taylor, Mora, Adams and Lopez-Feldman (2005)

Figure 5. Percentage of Country Work Forces in Agriculture and Per-capita Income (PPP Adjusted)




Sources of Data to Construct Figure: The World Bank (http://devdata.worldbank.org/dataonline/) and CIA Factbook 2005 (http://www.cia.gov/cia/publications/factbook/fields/2048.html).

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